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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,850	08/20/2001	Shoji Fujisawa	FUJISAWA 2	3565

1444 7590 01/02/2003

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EXAMINER

JONES, JUDSON

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,850

Applicant(s)

FUJISAWA ET AL.

Examiner

Judson H Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Specification

The abstract of the disclosure is objected to because it reads like a literal translation from a Japanese document. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 4-8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4-8 not been further treated on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Munehiro, Novak, Williams and Koide. Hayashi discloses a slider unit with a built in moving magnet or moving coil linear motor comprising a bed 32 and a table 33 as shown in figure 1 and as described in column 2 lines 30-34 and column 5 lines 38-40. Hayashi describes in detail only the moving magnet embodiment. However Munehiro teaches the advantages of the moving coil embodiment in column 2 lines 34-40 and teaches how this type motor can be constructed. Munehiro discloses a pair of field magnets 1A, 1B attached to a magnetic yoke 2 with magnets of alternating polarity along a moving direction and magnets of like polarity confronting each other across an air gap and a moving coil assembly in the gap between the

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magnets as shown in figure 2. Since Munehiro and Hayashi are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a moving coil embodiment in order to reduce the mass of the moving member and thus increase the efficiency and responsiveness of the device. Hayashi as modified by Munehiro does not disclose the moving coil assembly composed of an iron core of platy configuration or three phase armature coils. However Williams teaches in column 7 line 63 to column 8 line 4 that laminations (i.e., platy configurations) are desirable for eliminating eddy currents. Since Williams and Hayashi as modified by Munehiro are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a platy configuration in order to eliminate eddy current and thus to reduce heat losses and increase the efficiency of the device. In regard to the three phase power supply, see Koide column 1 lines 38-50 where the limitations of two-phase power for a precision positioning system is discussed and see column 2 lines 10-19 for a discussion of the advantages of a three phase system. It would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a three phase power supply in the device of Hayashi as modified by Munehiro, Novak and Williams in order to improve precision positioning and also to reduce costs.

In regard to claim 2, see Williams figure 2 that reveals a slider unit on top of a positioning system with pieces on the end. The end pieces add stability to the magnetic yoke.

In regard to claim 3, see Hayashi figure 1.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Japanese references JP359006767 A and JP40631925 A both disclose magnets of the

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same polarity opposing each other across an air gap. See figure 3 of the '767 reference, and see figure 1 of the '250 reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ *JHJ*
December 20, 2002

Judson Jones
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